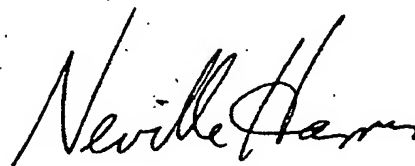


CERTIFICATE

This certificate is issued in support of an application for Patent registration in a country outside New Zealand pursuant to the Patents Act 1953 and the Regulations thereunder.

I hereby certify that annexed is a true copy of the Provisional Specification as filed on 14 July 1999 with an application for Letters Patent number 336774 made by GALLAGHER GROUP LIMITED.

Dated 23 April 2003.



Neville Harris
Commissioner of Patents



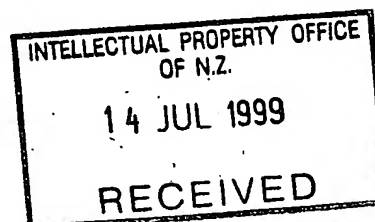
PATENTS FORM NO. 4

Appln Fee: \$50.00

James & Wells Ref:16245/19 CA

PATENTS ACT 1953
PROVISIONAL SPECIFICATION**IMPROVED INSULATOR SUPPORT**

WE, Gallagher Group Limited, a duly incorporated New Zealand company, of Kahikatea Drive, Hamilton, New Zealand, do hereby declare this invention to be described in the following statement:



IMPROVED INSULATOR

TECHNICAL FIELD

This invention relates to an improved insulator support.

BACKGROUND ART

- 5 Insulators for wires conducting an electrical current are sometimes manufactured separately from the main support wire, and attached to the support as required.

Security systems employing wall-top fencing are usually installed by attaching insulators to support rods atop the wall.

- 10 This process can be labour intensive and time consuming. Further, the insulators and the rods often lack aesthetic appeal.

The aesthetic quality of the insulators is important as wall-top security fencing is commonly employed in the domestic market. Thus, the main support for the insulator and electric fence needs to be configured for both appearance and its ability to support the fence wires.

- 15 The process of erecting both posts and insulators can therefore be time consuming and labour intensive as dedicated supports having aesthetic qualities and providing support can be harder to install than basic supports such as reinforcing rods.

It is an object of the present invention to address the foregoing problems or at least to provide the public with a useful choice.

- 20 Further aspects and advantages of the present invention will become apparent from the ensuing description which is given by way of example only.

DISCLOSURE OF INVENTION

According to one aspect of the present invention there is provided a method of construction of an electrical wire support,

characterised in the step of fitting a sleeve over a support means, the sleeve having at
5 least one web being at least partially insulating, wherein the web is configured to support electrical wires.

According to a further aspect of the present invention there is provided a method of adapting a support, characterised by the step of fitting a sleeve over the support, the sleeve having at least one web, being at least partially insulating and configured to
10 support electrical wires.

According to a further aspect of the present invention there is provided a sleeve configured to fit over a support member, characterised in that the sleeve has at least one web which is at least partially insulating, wherein the web is configured to support electrical wires.

15 Reference to a support may be made with reference to a structure configured to support an electric fence arrangement in a desired manner.

For example, the support may be a post, rod, beam, pile, block and so forth.

In preferred embodiments the support may be an upright length, hereafter referred to as a rod.

20 References to a rod should not be seen to be limiting as other supports may be used in accordance with the present invention.

Reference to a wire may be made with reference to any length that is used to conduct the electric current in the electric fence.

For example, the wire may include a length of metal wire, electric fence tape, mixed metal conductive lengths, and so forth.

The sleeve may have internal projections providing a friction fit between the sleeve and the rod.

- 5 In some embodiments the projections may be deformable.

The advantage of deformable projections may be that the sleeve may fit rods of variable diameter.

- 10 However, reference to projections should not be seen to be limiting. A friction fit between the support and the sleeve may equally be achieved between the rod and the internal wall of the sleeve.

In some embodiments the web may be continuous along the length of the sleeve.

In other embodiments the web may be spaced along the length of the sleeve.

In some embodiments, the web may have slots for retaining the electric fence wire.

The number of webs provided may vary according to necessity.

- 15 In some embodiments, there may be two webs, with oppositely angled slots, for retaining the electric fence wire.

In other embodiments there may be a single web, although this should not be seen to be limiting.

- 20 According to a further aspect of the present invention there is provided a method of constructing a sleeve as herein described above, characterised in the step of extruding the sleeve.

In some embodiments the extruded sleeve may have detents at set lengths.

This may enable standard size lengths to be cut.

Therefore if the standard lengths are placed along side each other, the wire holding means will be substantially aligned, providing a uniformly formed electric fence.

5 In some embodiments, the sleeve may have conductive areas imbedded in the moulding for various purposes.

In preferred embodiments, the sleeve may be manufactured from a substantially rigid material.

For example, this may include plastic, metal, Kevlar, ceramics, glass and so forth.

10 Preferably, the rigidity of the material may be such that it may withstand blows from a hammer to place the sleeve over the rod.

At least part of the sleeve may be manufactured for an electrically insulating material, such that the web or the wire supports are insulated.

The sleeve may also include a cap configured to attach to the top of the sleeve.

15 In preferred embodiments, the cap may be configured to positively lock the sleeve to the support.

One advantage of the cap may be to reduce the ability of intruders to remove the sleeve from the support and breaching the electric fence.

The cap may have fingers that insert into the sleeve and lock it into position on the support.

20 The cap may preferably be waterproof.

This has an advantage that mild steel or other cheaper materials with less resistance to corrosion may be used in the support because the cap will prevent or greatly minimise the amount of moisture that will come in contact with the support, and therefore reducing the risk of moisture corrosion.

5 The cap also improves the aesthetic appeal of the sleeve.

The present invention may have provision for advertising and promotional printing space on the sleeve. This may be included on the web.

The present invention provides a number of potential advantages.

10 The present invention provides a simple, cost effective and less time consuming method and apparatus for providing an electric fence wire support, with improved aesthetic appeal.

Whereas previously, dedicated supports were required to be erected with insulators attached in a separate process, the present invention allows simple cheap main supports to be used for the electric fence support, without compromising aesthetic
15 appeal, with the easily installed sleeve fitting over the support having an integrally formed provision for an insulated wire support.

BRIEF DESCRIPTION OF DRAWINGS

Further aspects of the present invention will become apparent from the following description which is given by way of example only and with reference to the
20 accompanying drawings in which:

Figure 1 shows a cross sectional view of one embodiment of the present invention, and

Figure 2 shows a side-on cross sectional view of a preferred embodiment of the present invention attached to a support.

Figure 3 shows a further embodiment, having two webs.

BEST MODES FOR CARRYING OUT THE INVENTION

According to Figure 1 there is shown a plan view of one embodiment of the present invention.

- 5 The sleeve (1) is substantially cylindrical, but includes a web (2) formed on the exterior of the cylindrical section. The sleeve (1) is mounted atop a wall (3), and has been slid over a rod (4) which is in turn embedded or otherwise fixably attached to the walltop (3).

10 It is envisaged that the sleeve (1) may be hammered or forced over the rod (4), to provide a tight friction fit.

In order to allow for variable rod diameters, projections (5) are formed on the inside of the sleeve projecting towards the centre. These projections (5) may be deformable to a degree, to provide a tight friction fit between the projections and the rod (4) whilst the deformability allows for variations in rod diameter.

- 15 The web (2) includes incisions, indicated by arrow 6 along the length of the web, the incisions configured to receive electric fence wire length (7).

The sleeve (1) is preferably manufactured from an insulating material such as plastic. However, the sleeve will meet the objects of the present invention as long as the web or the web/wire (7) contact point/incisions (6) is electrically insulated.

- 20 The sleeve (1) may be manufactured from other insulating materials such as glass, wood, Kevlar, carbon fibre and so forth.

With reference to Figure 2, there is shown a side-on cross-sectional view of the sleeve shown in Figure 1. The rod (4) is fixably attached to a wall (3). The sleeve (1) can be seen to be slid over the rod (4), the friction fit being provided between the rod (4) and projections (5) on the interior of the sleeve (1).

- 5 Incisions (6) are better shown in the web (2) and retain electric fence wire (7), which is shown passing through the page.

Also provided is a cap (8) which may seal the open top of the sleeve (1).

- The cap (8) may also have projecting fingers, that are configured to positively lock the cap (8), rod (4) and sleeve (1) together. This reduces the ability of a potential intruder
10 to remove the sleeve (1) from the rod (4), thereby breaching the security provided by the electric fence wires (7).

- The cap (8) also improves aesthetic appeal. The cap (8) also prevents or greatly minimises the amount of water or moisture accumulation within the sleeve (1), potentially preventing or greatly reducing the corrosive effects of moisture on the rod
15 (4).

Therefore, cheaper materials may be used in the manufacture of rod (4), reducing the overall cost of providing the electric fence support.

- It can be seen from the plan view of Figure 1 that the substantially cross-sectional uniform shape of the sleeve (1) will enable the sleeve to be manufactured by
20 extrusions.

With reference to Figure 3 there is shown a plan view with a further embodiment of the present invention. The numbered features on Figure 3 are the same as for Figures 1 and 2, except that the web (2) is replaced with two webs (9) and (10). The webs (9) and (10) work in concert with each other to retain the electric wire (7). The webs (9) and (10) include slots (11) and (12), respectively, which may be cut at opposing angles to work in concert to retain the electric wire (7) in position on the sleeve (1).

Aspects of the present invention have been described by way of example only and it should be appreciated that modifications and additions may be made thereto without departing from the scope thereof.

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Gallagher Group Limited

by its Attorneys

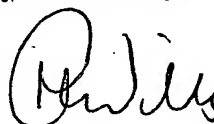
**JAMES & WELLS**

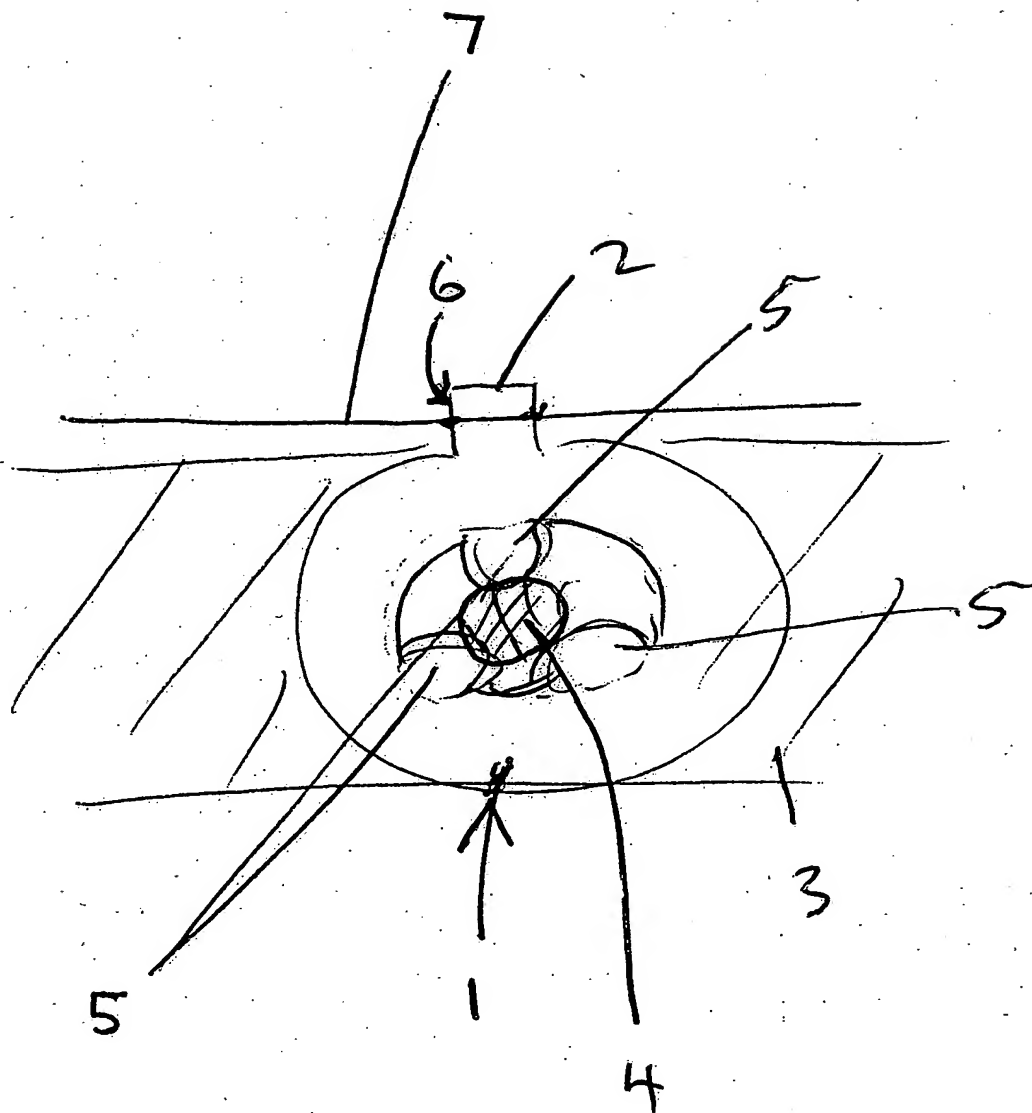
Fig 1

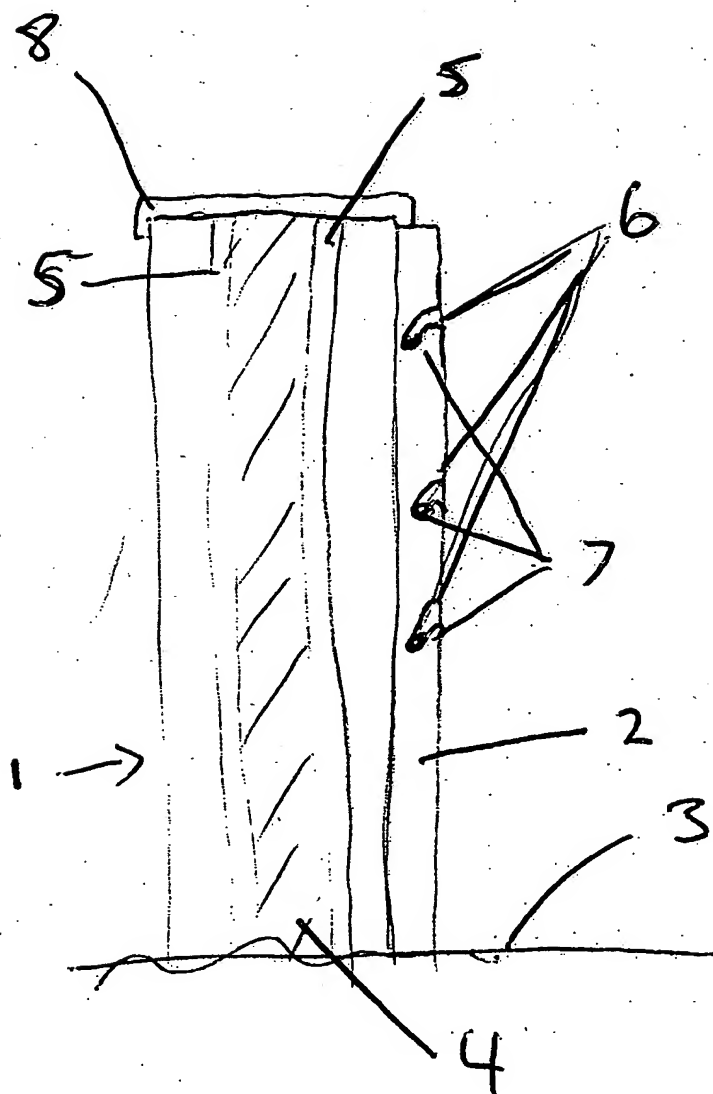
Fig 2

FIG 3